CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-098

NPDES NO. CA0037869

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

EAST BAY DISCHARGERS AUTHORITY
CITY OF HAYWARD
CITY OF SAN LEANDRO
ORO LOMA SANITARY DISTRICT
UNION SANITARY DISTRICT

AND

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY
ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. The East Bay Dischargers Authority (EBDA), by application dated December 1, 1988, on behalf of itself and its member agencies above, has submitted a report of waste discharge for reissuance of NPDES Permit No. CA0037869 to discharge combined wastes through a common outfall under the National Pollutant Discharge Elimination System (NPDES).

2. The Livermore-Amador Valley Water Management Agency (LAVWMA) member agencies have also applied for waste discharge requirements and renewal of NPDES Permits to discharge wastes through the EBDA outfall. EBDA and its member agencies, and LAVWMA are hereinafter collectively and individually referred to as dischargers. These waste discharge requirements are primarily for regulation of EBDA and its member agencies and the operation of the EBDA joint outfall facilities. Separate effluent waste discharge requirements have been adopted by the Board for the City of Livermore (Order No. 89-100 , NPDES No. CA00378006), and Dublin-San Ramon Services District (Order No. 89-099, NPDES No. CA0037613). → Actually CA0038008

3. Both EBDA and LAVWMA are Joint Exercise of Powers Agencies which exist under Joint Exercise of Powers Agreements (JEPA) to operate treated wastewater transport and disposal facilities. LAVWMA will transport effluent from its member agencies to the EBDA system in its transmission, flow-equalization, chlorination, and pumping facilities. By contractual agreement, EBDA will transport LAVWMA treated wastewater jointly with the treated wastewater from its member agencies to its dechlorination station near the San Leandro Marina (Marina Dechlorination Facility) and thence to its deepwater outfall in Lower San Francisco Bay west to the Oakland Airport at longitude 122 18' west, latitude 37 42' north. The outfall's diffuser is located 30,000 feet from shore; it discharges 23.5 feet below the surface at (MLLW); and it is designed to provide minimum initial dilution of greater than 10:1 at all times, and about 45:1 for 50% of the time.

4. All the EBDA member agencies currently operate, and will continue to operate, their own collection and treatment facilities.

5. The existing and proposed waste discharge volumes are as follows:

Agency	Actual 1987 ADWF(1)	Design Existing ADWF	Capacity Proposed ADWF	Peak WWF(4)
EBDA				
San Leandro	4.6	7.6	7.6	22.3
Oro Loma Sanitary District	14.0	20.0	20.0	69.2
Hayward(2)	12.4	13.1	16.5	35.0
Union Sanitary District(2)	22.9	24.2	35.0	42.9
Subtotal	53.9	64.9	79.1	169.4
LAVWMA	12.0	15.3	20.0	21.0 (4)
Totals	65.9	80.2	102.1	189.1

NOTES: (1)Average Dry Weather Flow (ADWF); All units in million gallons per day.

(2) Hayward and Union Sanitary Districts are in the process of documenting additional capacity already provided.

(3) Portions of the treated effluent from the member agencies are used for reclamation and marsh enhancement. These activities are regulated separately by the Board.

(4) Wet Weather Flow (WWF); Sum does not equal parts due to LAVWMA flow. The maximum LAVWMA flow to the EBDA system, under a LAVWMA-EBDA agreement, is 21.0 mgd if capacity is available. During peak EBDA WWF only 19.7 mgd capacity is available to LAVWMA in the EBDA system. If EBDA system capacity is not available due to peak WWF, LAVWMA is authorized to discharge up to 1.3 mgd of its peak WWF to San Lorenzo Creek by a separate Board order.

6. The discharge is presently governed by Waste Discharge Requirements (NPDES Permit), Order No. 84-30, which allows discharge into Lower San Francisco Bay.

7. EBDA's JEPA delegates the authority and responsibility to EBDA to assure compliance with all effluent waste discharge requirements. It is the intent of the EBDA JEPA to allow determination of compliance with waste discharge requirements by considering EBDA as a total system, to permit the most effective operation of all EBDA and member agency treatment facilities. The EBDA JEPA, therefore empowers that Joint Agency to monitor each member agency's discharge and the combined discharge and prescribes that the Joint Agency may, if necessary, undertake modifications of any member agency's treatment facilities to secure compliance with effluent discharge requirements.

Since LAVWMA and its tributary agencies are not signatories to the EBDA JEPA, the EBDA-LAVWMA agreement empowers EBDA to monitor discharges by LAVWMA into the EBDA system and requires LAVWMA, as a condition of continuing service, to comply with all requirements prescribed by the BOARD, except residual chlorine, for which EBDA will be responsible.

The LAVWMA JEPA limits that Joint Agency to providing and operating the transport (and auxiliary) facilities from its member agencies' treatment plants to EBDA. LAVWMA is not empowered to take actions to secure member agency compliance with requirements.

8. As used herein, "Common Outfall" means the EBDA outfall; "Combined Discharge" refers to the waste stream at any point where all wastes tributary to that outfall are present; and "Individual Treatment Plant" means a treatment facility operated by a member agency or either EBDA or LAVWMA.

9. All EBDA member agencies have implemented approved EPA Local Pretreatment Programs for source control and application of pretreatment standards.

10. Sludge storage sites at the Hayward and Oro Loma Sanitary District plants have the potential for discharge to surface or groundwater and thus constitutes a threatened discharge pursuant to Section 13260 of the Water Code. Oro Loma has already begun a study to evaluate risks from sludge storage.

11. The Board amended its Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Water Resources Control Board approved it on May 21, 1987. The Basin Plan contains water quality objectives for Lower San Francisco Bay and contiguous waters.

12. The existing and potential beneficial uses of Lower San Francisco Bay and contiguous water bodies are:

    Water contact and non-contact recreation
    Wildlife habitat
    Preservation of rare and endangered habitat
    Estuarine habitat
    Fish migration and spawning
    Industrial service and process supply
    Shellfish harvesting
    Navigation
    Commercial and sport fishing

13. An Operation and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.

14. This Order serves as an NPDES Permit, reissuance of which is exempt from the provision of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

15. The discharger and interested agencies and persons have been notified of the Board's intent to reissue waste discharge requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

16. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger (s) in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act, as amended and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant(s) or from any of the joint facilities or individual member collection system(s) and pump stations tributary to the treatment plant is prohibited.

2. The average dry weather flow of EBDA shall not exceed the design existing average dry weather flow as specified in Finding No. 5 of this Order. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

   Exceptions to the design existing average dry weather flows in Finding No. 5 for the individual agencies up to the maximum of the proposed design average dry weather flows for the EBDA system only may be approved by the Executive Officer upon submittal of a satisfactory technical report demonstrating that compliance with effluent limits at the EBDA outfall will be consistently achieved and that the EBDA commission approves the change. In no instance will the Executive Officer approve design average dry weather flow changes such that the total proposed design average dry weather flow for EBDA is exceeded. The intent of this exception procedure is to consider EBDA as a total system to allow EBDA and its member agencies to operate in the most efficient manner in complying with these waste discharge requirements.

3. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits. Compliance with effluent limitations shall be demonstrated in the combined discharge, except that EBDA may elect to demonstrate compliance with requirements denoted by "*" in the discharge from individual member agency treatment plants after prior approval of the Executive Officer. Demonstration of compliance for removal rates will be based upon the algebraic summing of the EBDA agency loadings.

Constituents	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. Carbonaceous BOD	mg/l	25	40	-	-
c. Total Suspended Solids	mg/l	30	45	-	-
d. Oil and Grease	mg/l	10	-	20	-

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20C) and suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same times during the same period (i.e. 85 percent removal).

3.*. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

4.*. The survival of test organisms acceptable to the Executive Officer in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples.

5. Representative samples of the effluent shall not exceed the following limits (1):

Constituent	Unit	Daily Average
Arsenic	µg/L	200
Cadmium	µg/L	30
Chromium(IV)	µg/L	110
Copper	µg/L	200
Cyanide	µg/L	25
Lead	µg/L	56
Mercury	µg/L	1
Nickel	µg/L	71
Silver	µg/L	23
Zinc	µg/L	580
Phenols	µg/L	500
PAHs(2)	µg/L	150
Selenium(3)	µg/L	-

Notes: (1) These limits are intended to be achieved through secondary treatment, source control, and application of pretreatment standards by each EBDA member.
(2) Polynuclear aromatic hydrocarbons
(3) Selenium limit to be established

6.*. The median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters. Any single sample shall not exceed 10,000 MPN/100 ml.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural

background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a. **Dissolved Oxygen:**
5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those speci fied above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

b. **Dissolved Sulfide:**
0.1 mg/l maximum

c. **pH:**
Variation from natural ambient pH by more than 0.5 pH units.

d. **Un-ionized Ammonia:**
0.025 mg/l as N Annual Median, 0.4 mg/l as N Maximum.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Sludge Storage Requirements

1. The discharge of sewage shall not cause waste material to be in a position where it is, or can be carried from the sludge storage site and deposited in the waters of the state.

2. Sludge storage sites shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the storage site. Adequate protection is de-fined as protection from at least a 100-year storm and protection is defined as protection from the highest possible tidal surge that may occur. These facilities are to be provided within the life of this permit.

3. The discharge to a sludge storage site of waste other than sewage sludge produced by a permitted facility is prohibited.

4. The storage of sludge shall not cause the degradation of groundwaters.

5. The Executive Officer may require EBDA members to prepare a hydrogeologic report that estimates the threat to waters of the State from sewage sludge storage sites.

6. The Board may amend this permit prior to the expiration date, if changes occur in applicable state and federal sludge regulations.

E. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 84-30. Order No. 84-30 is hereby rescinded.

2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall apply:

   Mass Emission Limit in lbs/day = Concentration limit in mg/l x 8.34 x Actual Flow in mgd over the time interval for which the limit applies.

3. The discharger shall comply with all sections of this Order immediately upon adoption.

4. The discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

5. The discharger shall annually review and update its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The discharger shall implement and enforce its approved pretreatment program in accordance with Board Order No. 84-60 and its amendments thereafter. The discharger's responsibilities include, but are not limited to:

   a. Enforcement of National Pretreatment Standards (e.g. prohibited discharges, Categorical Standards, local limits) in accordance with 40 CFR 403.5 and Section 307(b) and (c) of the Clean Water Act.

   b. Implementation of the pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment Regulations (40 CFR 403) and its approved pretreatment program.

   c. Submission of annual and quarterly reports to EPA and the State as described in Board Order 84-60 and its amendments thereafter.

7. This Board considers EBDA to be the agency primarily responsible for the combined waste discharge and the discharge of its member agencies in the common outfall. Therefore, in the administration and enforcement of this Order, this Board will first pursue its administrative and/or legal remedies with EBDA. If, however, the Board finds that EBDA does not have the ability or willingness to take appropriate action, or if special, unusual, circumstances arise that indicate that direct action should be taken against a member agency or agencies, this Board may pursue appropriate action against such member agency or agencies.

8. The discharger shall comply with the attached Self-Monitoring Program. The Executive Officer may make minor amendments to it pursuant to federal regulations (40 CFR 122.63).

9. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.

10. This Order expires June 21, 1994. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as applicable for issuance of new waste discharge requirements.

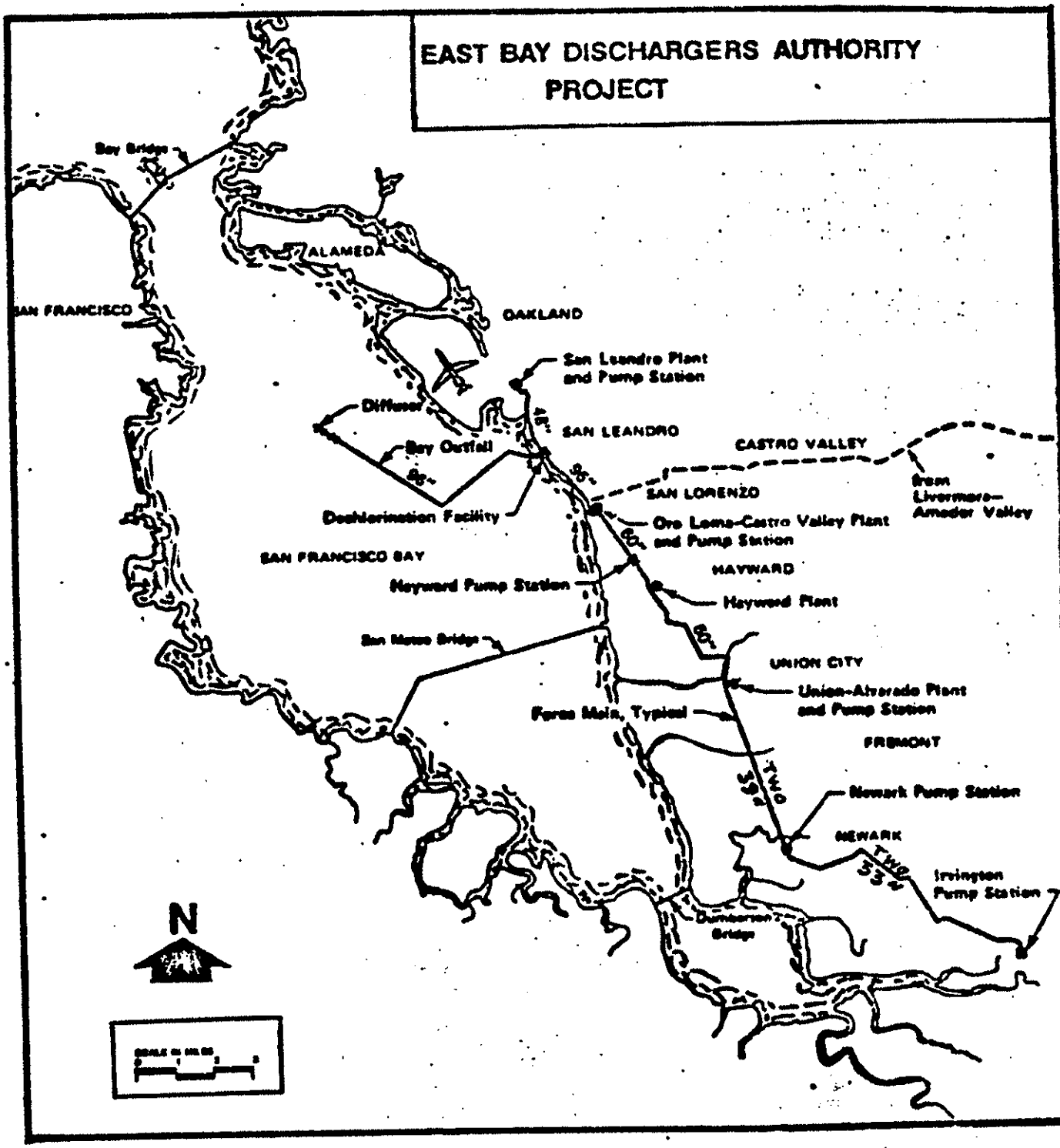
11. This Order shall serve as a National Pollutant Discharge Elimination Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 21, 1989.

Steven R. Ritchie
Executive Officer

Attachments:

Location Map
Standard Provisions and Reporting Requirements, December 1986
Self-Monitoring Program



ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

EAST BAY DISCHARGERS AUTHORITY
CITY OF HAYWARD
CITY OF SAN LEANDRO
ORO LOMA SANITARY DISTRICT
UNION SANITARY DISTRICT

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY

NPDES NO. CA0037869

ORDER NO. 89-098

CONSISTING OF

PART A, DATED DECEMBER 1986

AND PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT (ALL EBDA TREATMENT PLANTS)

Station	Description
A-1	At any point in the individual treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment or sidestream.

B. EFFLUENT (ALL EBDA TREATMENT PLANTS AND OUTFALL)

Station	Description
E-1	At any point in the EBDA common outfall at which all waste tributary to that outfall is present.
E-2	At any point in the individual treatment plant facilities at which adequate disinfection has taken place and just prior to where the individual facility transfers control of its effluent to EBDA facilities. Upon approval of the Executive Officer may be the same as E-1.

C. RECEIVING WATERS (SAN FRANCISCO BAY)

Station	Description
C1, C2, C4	Located per station 1. 2, and 4 respectively as shown in Figure 1.
C-R (C3)	Reference station located at station 3 as shown on Figure 1.

D. LAND OBSERVATIONS (ALL EBDA TREATMENT PLANTS AND DECHLORINATION FACILITY

Station	Description
P-1 through P-n	Located at the corners and midpoints of the perimeter fenceline surrounding the individual and EBDA facilities (A sketch showing the locations of these stations will accompany each report).

E. OVERFLOWS AND BYPASSES (ALL EBDA TREATMENT PLANTS, COLLECTION SYSTEMS, INTERCEPTOR AND OUTFALL)

Station	Description
O-1 through O-n	Bypass or overflows from manholes, pump stations, interceptor, or collection system.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 89-098.

2. Has been ordered by the Regional Board on 21 June, 1989.

3. May be revised pursuant to CFR 122.36 or by the Regional Board.

Steven R. Ritchie
Executive Officer

Attachments:
Table 1
Figure 1

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS (1) (7)

SAMPLING STATION	A-1	E-1	E-1	E-1	E-2	E-2	E-2	All P Sta.	All O Sta.	All C Sta.
TYPE OF SAMPLE	C-24	G (3)	C-24	Cont.	G (3)	C-24	Cont.	O	O	O
Flow Rate (mgd)	D			D			D			
CBOD, 5-day, 20 C (mg/L & kg/day) (2)	5/W		5/W			5/W				
Chlorine Residual & Dosage (mg/L & kg/day) (6)		H or Cont.			H or Cont.					
Settleable Matter (ml/hr. & cu.ft./day)		D								
Total Suspended Matter (mg/L & kg/day) (2)	5/W		5/W			5/W				
Oil and Grease (mg/L & kg/day) (3)		2/M								
Coliform (total or fecal) (MPN/100 ml) per req't					3/W					M
Fish toxicity-96 hr. Surv'l in undiluted waste			2/M (4)							
Ammonia Nitrogen (mg/L & kg/day)			4/M							M
Nitrate Nitrogen (mg/L & kg/day)										
Nitrite Nitrogen (mg/L & kg/day)										
Total Organic Nitrogen (mg/L & kg/day)										
Total Phosphate (mg/L & kg/day)										
Turbidity (Jackson Turbidity Units)										
pH (units)		D								M
Dissolved Oxygen mg/L & % saturation										M
Temperature (C)		D								M
Apparent Color (color units)										
Secchi Disc (inches or cm.)										M
Sulfides (if DO<5.0 mg/L) Total & Dissolved (mg/L)										M
Arsenic (mg/L & kg/day)			W			M (5)				
Chromium VI (mg/L & kg/day)			W			M (5)				

TABLE 1 (Cont.)

SAMPLING STATION	A-1	E-1	E-1	E-1	E-2	E-2	E-2	All P Sta.	All O Sta.	All C Sta.
TYPE OF SAMPLE	C-24	G (3)	C-24	Cont.	G (3)	C-24	Cont.	O	O	O
Cadmium (mg/L & kg/day)			W			M (5)				
Copper (mg/L & kg/day)			W			M (5)				
Cyanide (mg/L & kg/day)			W			M (5)				
Silver (mg/L & kg/day)			W			M (5)				
Lead (mg/L & kg/day)			W			M (5)				
Mercury (mg/L & kg/day)			W			M (5)				
Nickel (mg/L & kg/day)			W			M (5)				
Zinc (mg/L & kg/day)			W			M (5)				
Selenium (mg/L & kg/day)			W			M (5)				
Phenolic Compounds (mg/L & kg/day)			W			M (5)				
Polynuclear Aromatic Hydrocarbons (PAHs) (mg/L & kg/day)			W			M (5)				
All Applicable Standard Observations										

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = 24 hour composite sample
C-X = X hour composite sample (used when discharge does not continue for 24 hour period)
Cont. = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwater stations

FREQUENCY OF SAMPLING

E = each occurrence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September
Q = quarterly, once in March, June, Sept., and December

Cont = continuous

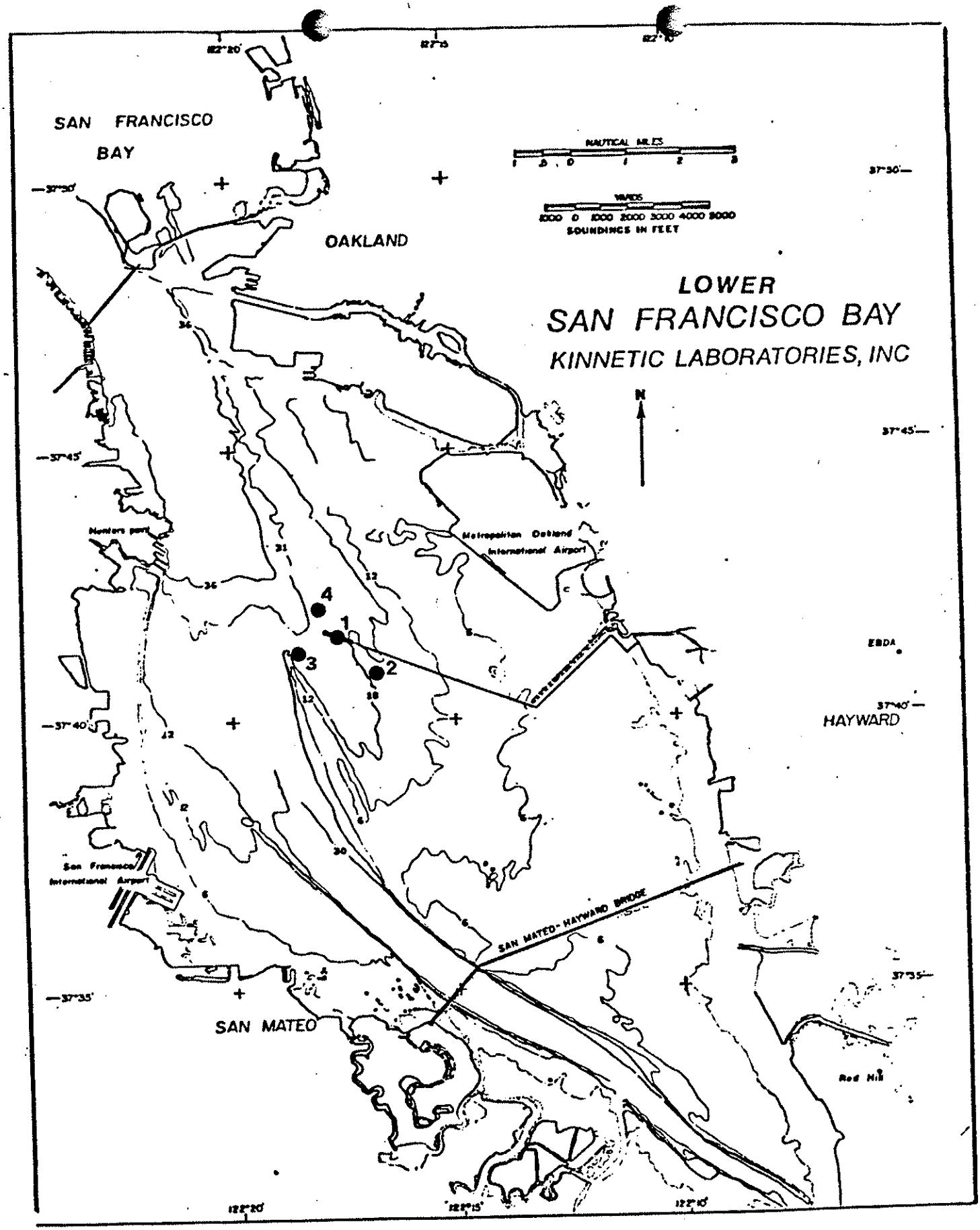


Figure 1. Receiving water stations

NOTES FOR TABLE 1

1. During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

   a. Composite sample for BOD and Total Suspended Solids.

   b. Grab samples for Total Coliform, Settleable Matter, and Oil and Grease.

   c. Continuous monitoring of flow.

   d. Continuous or every two hour monitoring of chlorine residual.

The above requirement will not apply if a portion of the plant's flow bypasses the secondary treatment unit during peak wet weather periods in order to prevent solids washout.

2. Percent removal (effluent vs. influent) shall also be reported.

3. Grab samples shall be taken on day(s) of composite sampling.

4. Fish toxicity test compliance shall be demonstrated in the EBDA combined outfall. Compliance bioassays shall be performed using two fish species in parallel flow through bioassay tests. One shall be the three-spine stickleback and the other shall be the fathead minnow. Chlorinated samples may be used following dechlorination.

In the event that a fish toxicity violation is detected, the discharger shall also perform toxicity tests at the individual treatment plant until compliance is achieved. The individual plants may use static renewal tests in lieu of flow through tests.

5. If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples. The Executive Officer may reduce basic sampling frequency after one year if lesser frequencies will provide statistically valid results.

6. Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation.

7. Monthly sampling dates and approximate times shall coincide with receiving water monitoring conducted by EBDA.

8. Sludge disposal shall be reported monthly. Daily records shall be kept of the quantity (cu. yds. or cu. ft.) and solids content (%) of dewatered sludge disposed of and the location of disposal.